# GHAJAR
# EXHIBIT 56

1               UNITED STATES DISTRICT COURT

2             NORTHERN DISTRICT OF CALIFORNIA

3                SAN FRANCISCO DIVISION

4                  _____

5

        RICHARD KADREY, et al.,      )Volume 2

6       Individual and               )

        Representative               )

7                                    )

                 Plaintiffs,         )Case No.

8                                    )3:23-cv-03417-VC

             vs.                     )

9                                    )

        META PLATFORMS, INC., a      )

10      Delaware corporation;        )

                                     )

11               Defendant.          )

                                     )

12

13

14

15           REMOTE VIDEOTAPED DEPOSITION

16                     OF

17           CRISTINA VIDEIRA LOPES, Ph.D.

18              Friday, March 7, 2025

19           Santa Ovaia de Cima, Portugal

20

21

22

23

24

25      Reported by:  B. Suzanne Hull, CSR No. 13495


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| | | |
|---|---|---|
| 1 | A.  Correct.  Yes. | 10:22:09 |
| 2 | Q.  Okay.  And then -- so -- but your report | 10:22:09 |
| 3 | doesn't look like it has analysis of memorization | 10:22:11 |
| 4 | using the Meta AI model; correct? | 10:22:14 |
| 5 | A.  That is -- that is correct, yeah. | 10:22:18 |
| 6 | Q.  Okay.  Dr. Lopes, if you could turn to page | 10:22:20 |
| 7 | two of your report, around paragraph seven. | 10:22:40 |
| 8 | A.  (Witness complies.) | 10:22:43 |
| 9 | MR. YOUNG:  Counsel, just to clarify, you | 10:22:45 |
| 10 | mean the supplemental report? | 10:22:48 |
| 11 | MR. WEINSTEIN:  Yes. | 10:22:50 |
| 12 | Exhibit 13.  Thank you. | 10:22:50 |
| 13 | MR. YOUNG:  Thank you. | 10:22:54 |
| 14 | THE WITNESS:  Yes. | 10:22:54 |
| 15 | BY MR. WEINSTEIN: | 10:22:55 |
| 16 | Q.  And then I'll just read the first part of | 10:22:58 |
| 17 | paragraph seven, and we'll ask some questions about | 10:23:07 |
| 18 | it: | 10:23:09 |
| 19 | "After the corrections," comma, "the | 10:23:10 |
| 20 | Llama 3 70B model was able to continue all | 10:23:12 |
| 21 | seventy-three passages successfully, | 10:23:17 |
| 22 | according to multiple metrics, showing strong | 10:23:20 |
| 23 | memorization effects." | 10:23:21 |
| 24 | Do you see that? | 10:23:22 |
| 25 | A.  Yes. | 10:23:23 |

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| | | |
|---|---|---|
| 1 | Q. In the next sentence you say: | 10:23:23 |
| 2 | "In nineteen out of seventy-three of the | 10:23:26 |
| 3 | cases (26 percent), the Llama 3 70B model was | 10:23:27 |
| 4 | able to extend the prompt with tokens that | 10:23:31 |
| 5 | were 100 percent identical to the | 10:23:34 |
| 6 | corresponding text in the copyrighted work." | 10:23:37 |
| 7 | Do you see that? | 10:23:38 |
| 8 | A. Yes. | 10:23:39 |
| 9 | Q. That is a lower percentage than the original | 10:23:39 |
| 10 | results in the original rebuttal; correct? | 10:23:43 |
| 11 | A. Correct. | 10:23:47 |
| 12 | Q. You also mention in your report and in | 10:23:48 |
| 13 | paragraph eight that similarity metric known as | 10:23:53 |
| 14 | Jaccard, J-a-c-c-a-r-d; correct? | 10:23:58 |
| 15 | A. Yes. | 10:24:01 |
| 16 | Q. And Jaccard, that is a similarity where you | 10:24:02 |
| 17 | identify the number of items that are in common | 10:24:07 |
| 18 | between two tests. | 10:24:13 |
| 19 | And then you identify the total number, and | 10:24:14 |
| 20 | you just divide the intersection by the unit to get | 10:24:18 |
| 21 | a number; correct? | 10:24:22 |
| 22 | A. Correct. | 10:24:23 |
| 23 | Q. So it -- in Jaccard, is it true that the | 10:24:24 |
| 24 | word order is not taken into account? | 10:24:29 |
| 25 | A. That is correct. | 10:24:32 |

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1    BY MR. WEINSTEIN:                                    10:37:54

2        Q.   Or memorization tests, I should say.       10:37:54

3            MR. YOUNG:   Same objection.                10:37:57

4    BY MR. WEINSTEIN:                                    10:38:08

5        Q.   Now, before the seventy-three samples that 10:38:14

6    you tested for your rebuttal report, you were able to 10:38:17

7    identify certain passages from certain works that   10:38:25

8    Llama was able to complete at least a portion of    10:38:31

9    them; correct?                                       10:38:34

10       A.   Correct.                                    10:38:34

11       Q.   Do you know what proportion of the          10:38:37

12   underlying books Meta was able to complete through  10:38:42

13   these samples?                                       10:38:47

14           MR. YOUNG:   Objection.  Form.   Scope.      10:38:48

15           THE WITNESS:   Can you repeat the question?  10:38:52

16   I'm not sure I understand.                           10:38:54

17   BY MR. WEINSTEIN:                                    10:38:55

18       Q.   Sure.                                       10:38:55

19           You identify a bunch of passages that Llama 10:38:56

20   could, to some extent, complete from original works; 10:39:01

21   correct?                                             10:39:06

22       A.   Correct.                                    10:39:07

23       Q.   The question was do you know how large the  10:39:07

24   original works were that were referenced in the     10:39:10

25   samples?                                             10:39:13
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| | | |
|---|---|---|
| 1 | MR. YOUNG:  Same objection.  Form and scope. | 10:39:14 |
| 2 | THE WITNESS:  So I think this gets -- okay. | 10:39:18 |
| 3 | I -- so I -- I don't know.  I mean, it is much -- it | 10:39:20 |
| 4 | is a lot -- it is a lot more passages than these, of | 10:39:23 |
| 5 | course.  But this goes, again, to my point that this | 10:39:27 |
| 6 | was not an experiment.  This was a test.  You have | 10:39:29 |
| 7 | that -- those passages that -- you know, I -- I -- | 10:39:33 |
| 8 | you know, I didn't choose them.  Those -- those | 10:39:36 |
| 9 | passages were given to me.  And the task was to check | 10:39:37 |
| 10 | whether the results that Mr. Hunt had obtained on | 10:39:41 |
| 11 | those passages could be reproduced. | 10:39:44 |
| 12 | BY MR. WEINSTEIN: | 10:39:47 |
| 13 | Q.  Right. | 10:39:47 |
| 14 | A.  That -- that was -- that was the test here; | 10:39:47 |
| 15 | so it was not to -- to check how much of the books we | 10:39:49 |
| 16 | could reproduce. | 10:39:55 |
| 17 | Q.  Understood. | 10:39:57 |
| 18 | So -- so you didn't analyze what percentage | 10:39:58 |
| 19 | of the underlying books Meta was able to reproduce; | 10:40:01 |
| 20 | correct? | 10:40:06 |
| 21 | A.  That is correct. | 10:40:06 |
| 22 | Q.  Okay.  I would like to present as the next | 10:40:06 |
| 23 | exhibit in order -- I think it is Exhibit 14 -- one | 10:40:13 |
| 24 | of the samples from your report -- your supplemental | 10:40:16 |
| 25 | report. | 10:40:23 |

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| | | |
|---|---|---|
| 1 | BY MR. WEINSTEIN: | 10:43:02 |
| 2 | Q.  And this is the same -- this is the same | 10:43:02 |
| 3 | excerpt from your supplemental report, also from | 10:43:07 |
| 4 | Daniel Okrent, "Last Call."  And if you look at the | 10:43:13 |
| 5 | second sheet, I have a portion of the United States | 10:43:19 |
| 6 | Constitution, which has been reproduced from the | 10:43:23 |
| 7 | Website congress.gov. | 10:43:26 |
| 8 | And if you can confirm for me that this | 10:43:30 |
| 9 | excerpt is actually the portion of the | 10:43:33 |
| 10 | Fourteenth Amendment to the United States | 10:43:38 |
| 11 | Constitution. | 10:43:39 |
| 12 | A.  It looks like it is. | 10:43:40 |
| 13 | Q.  Okay.  I guess my question is when you see | 10:43:41 |
| 14 | an example like this where Mr. Hunt has reported on | 10:43:44 |
| 15 | a book that is -- has a common text that Llama is | 10:43:47 |
| 16 | able to reproduce, we don't actually know whether or | 10:43:55 |
| 17 | not Llama was able to reproduce it because it learned | 10:43:59 |
| 18 | it from the book, as opposed to learning it from some | 10:44:02 |
| 19 | other public source; correct? | 10:44:06 |
| 20 | MR. YOUNG:  Objection.  Form and scope. | 10:44:08 |
| 21 | THE WITNESS:  Yeah. | 10:44:10 |
| 22 | BY MR. WEINSTEIN: | 10:44:10 |
| 23 | Q.  And then -- so -- so -- so for any of the | 10:44:11 |
| 24 | samples that we have in your report, we don't | 10:44:14 |
| 25 | actually know if Meta's ability to reproduce portions | 10:44:19 |

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1   STATE OF CALIFORNIA )

                        ) ss.

2   COUNTY OF KERN      )

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5           I, B. Suzanne Hull, a Certified Shorthand

6   Reporter in the State of California, holding

7   Certificate Number 13495, do hereby certify that

8   CRISTINA VIDEIRA LOPES, Ph.D., the witness named in

9   the foregoing deposition, was by me duly sworn; that

10  said deposition, was taken Friday, March 7, 2025, at

11  the time and place set forth on the first page

12  hereof.

13          That upon the taking of the deposition, the

14  words of the witness were written down by me in

15  stenotypy and thereafter transcribed by computer

16  under my supervision; that the foregoing is a true

17  and correct transcript of the testimony given by the

18  witness.

19          Pursuant to Federal Rule 30(e), transcript

20  review was requested.

21          I further certify that I am neither counsel

22  for nor in any way related to any party to said

23  action, nor in any way interested in the result or

24  outcome thereof.

25  ///
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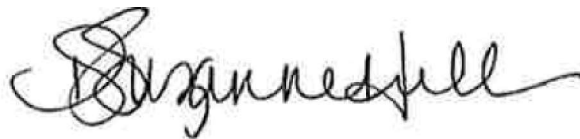
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1     Dated this 7th day of March, 2025, at

2   Bakersfield, California.

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9     B. Suzanne Hull, CSR No. 13495

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